

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

Inventor(s): Marks et al.

Confirmation No.: 1388

Application No.: 09/507,427

Examiner: Ho, The T.

Filing Date: 2/19/00

Group Art Unit: 2126

Title: A System and Method To Pace Event Sharing Collaboration Across Multiple Distributed Processes

Mail Stop Appeal Brief-Patents
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TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in **triplicate** is the Appeal Brief in this application with respect to the Notice of Appeal filed on Sept. 30, 2003.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month	\$110.00
() two months	\$420.00
() three months	\$950.00
() four months	\$1480.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account **08-2025** the sum of \$330.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Number of pages:

Typed Name: Hui Chin Bernhill

Respectfully submitted,

Marks et al.

By Robert A. Blaha

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Reg. No. **43,502**

Date: Dec. 1, 2003

#10/Appeal Brief
In re Marks et al.
09/507,427 12/12/03

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: John Marks *et al.*)
Serial No.: 09/507,427)
Filed: February 19, 2000)
For: **A SYSTEM AND METHOD TO**)
PAGE EVENT SHARING)
COLLABORATION ACROSS)
MULTIPLE DISTRIBUTED)
PROCESSES)

Group Art Unit: 2126

Examiner: Ho, The T.

HP Docket No.: 10991105-1

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APPEAL BRIEF UNDER 37 C.F.R. §1.192

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Sir:

This is an appeal from the decision of Examiner The T. Ho, Group
Art Unit 2126, of July 2, 2003 (Paper No. 6), rejecting all claims 1-17 and
19-21 in the present application and making the rejection FINAL.

Appeal Brief Items required under 37 C.F.R. §1.192(c) begin on page 3 of this
paper.

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Hui Chin Barnhill

AUTHORIZATION TO DEBIT ACCOUNT

It is not believed that extensions of time or fees for net addition of claims are required, beyond those, which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. §1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to Hewlett-Packard Company's deposit account no. 08-2025.

I. REAL PARTY-IN-INTEREST

The real party-in-interest is the assignee, Hewlett-Packard Development Company, a Delaware corporation, having its principal place of business in Palo Alto, California. An assignment to Hewlett-Packard Development Company was recorded on September 30, 2003, on reel 014061, at frame 0492.

II. RELATED APPEALS AND INTERFERENCES

There are no known related appeals or interferences.

III. STATUS OF CLAIMS

Claims 1-17 and 19-21 stand finally rejected. No claims have been allowed. The final rejection of claims 1-17 and 19-21 is appealed. For the reasons set forth below, Appellants respectfully request that the rejections be overturned.

IV. STATUS OF AMENDMENTS

No amendments have been submitted after the FINAL Office Action, and all amendments submitted prior to that have been entered. The claims in the attached Appendix reflect the present state of pending claims 1-17 and 19-21.

The final rejection of claims 1-17 and 19-21 is appealed.

V. SUMMARY OF THE INVENTION

Appellants' independent claim 1 identifies a system (2) for pacing the transmission of events associated with a local application (200) that are shared with at least one corresponding remote application (400). The system (2) comprises a local

application sharing logic coupled to the local application (200). The local application sharing logic is configured to receive events to be shared from said local application (200) with the at least one corresponding remote application (400), generate echo events (324), transmit locally generated events including said echo events (331) to said remote application (400), and pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.

Appellants' independent claim 8 identifies a method (320) for pacing the transmission of events associated with a local application (200) that are shared with at least one corresponding remote application (400). The method comprises transmitting said events to be shared (321) from said local application (200) and providing a local application sharing logic configured to receive said events to be shared. The local application sharing logic is further configured to generate echo events (324), controllably insert the echo events with said events to be shared (325), and transmit said events to be shared together with said inserted echo events (331) to a remote application (400).

Appellants' independent claim 15 identifies a system (2) for pacing the transmission of events associated with a local application (200) that are shared with at least one corresponding remote application (400). The pacing system (2) comprises a means for transmitting said events to be shared from said local application (200), a means for generating echo events, a means for inserting said echo events along with said events to be shared, and a means for pacing the transmission of said events to be shared. The means for pacing is responsive to an echo delay.

VI. ISSUES

The issues on appeal are as follows:

- A. Whether rejected claims 1, 8, 9, and 15 are unpatentable under 35 U.S.C. §102(b) over U.S. Patent Number 5,844,553 to Hao *et al.*?
- B. Whether rejected claims 2, 3, 10, and 16 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent Number 5,844,553 to Hao *et al.* in view of U.S. Patent 5,768,528 to Stumm?
- C. Whether rejected claims 4-7, 11-14, 17, and 19-21 are unpatentable under 35 U.S.C. §103(a) over U.S. Patent Number 5,844,553 to Hao *et al.* in view of U.S. Patent 6,167,358 to Othmer?

VII. GROUPING OF CLAIMS

Appellants have grouped the pending claims 1-17 and 19-21 into the following three (3) distinct claim groups:

- Group A: Claims 1-7;
- Group B: Claims 8-14; and
- Group C: Claims 15-17 and 19-21.

As explained below, each of the claims within the separate claim groups covers a distinct scope of the Appellants' systems and methods.

A. Claims 1-7 stand or fall as a group (Group A) with respect to the rejection of claim 1 over U.S. Patent Number 5,844,553 to Hao *et al.* (*Hao*) and with respect to the rejection of claims 2 and 3 over *Hao* in view of U.S. Patent 5,768,528 to Stumm (*Stumm*) and with respect to the rejection of claims 4-7 over *Hao* in view of U.S. Patent 6,167,358 to Othmer (*Othmer*) for at least the reason that the cited references and proposed combinations of references fail to disclose, teach, or suggest each element recited in independent system claim 1.

Specifically, the cited art references fail to disclose, teach, or suggest a local application sharing logic configured to “generate echo events, transmit locally generated events including said echo events to said remote application, and pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.” This element and its limitations is distinct from the elements of the remaining claim groups. Therefore, claims 1-7 stand or fall independent of the claims of the other claim groups.

B. Claims 8-14 stand or fall as a group (Group B) with respect to the rejection of claims 8 and 9 over *Hao* and with respect to the rejection of claim 10 over *Hao* in view of the ‘528 patent and with respect to the rejection of claims 11-14 over *Hao* in view of *Othmer* for at least the reason that the cited references and proposed combinations of references fail to disclose, teach, or suggest each limitation recited in independent method claim 8.

Specifically, the cited art references fail to disclose, teach, or suggest providing a local application sharing logic configured to “generate echo events, controllably insert the echo events with said events to be shared, and transmit said events to be shared and

said echo events to a remote application.” This limitation is distinct from the elements of the remaining claim groups. Therefore, claims 8-14 stand or fall independent of the claims of the other claim groups.

C. Claims 15-17 and 19-21 stand or fall as a group (Group C) with respect to the rejection of claim 15 over *Hao* and with respect to the rejection of claim 16 over *Hao* in view of *Stumm* and with respect to the rejection of claims 17 and 19-21 over *Hao* in view of *Othmer* for at least the reason that the cited references and proposed combinations of references fail to disclose, teach, or suggest each element recited in independent system claim 15.

Specifically, the cited art references fail to disclose, teach, or suggest “means for generating echo events, means for inserting said echo events along with said events to be shared, and means for pacing the transmission of said events to be shared, said means for pacing responsive to an echo delay derived from said echo events.” This element is distinct from the elements of the remaining claim groups. Therefore, claims 15-17 and 19-21 stand or fall independent of the claims of the other claim groups.

VIII. THE ARGUMENT

Appellants respectfully request that the Board overturn the rejection of claims 1-17 and 19-21 for at least the reasons discussed below.

Fundamental Distinction Regarding the Hao Patent

Before addressing the representative claims of the individual claim groups, Appellants note at least one fundamental distinction regarding *Hao*, which is applicable

to ALL claims of the present application. Specifically, the Examiner has taken the position that *private input* events anticipate Appellants' claimed *echo* events. For several independent reasons (set forth immediately below), this application of the teachings of *Hao* is fundamentally misplaced, and the rejections should be overturned on this basis alone. This misapplication of *Hao* applies to ALL claims. Therefore, notwithstanding the additional distinctions of various claims (set forth below in the discussions of the independent claim groups), the Board's conclusion that the Examiner has erred in this fundamental misplaced teaching of *Hao* will mandate that all rejections be overturned.

Hao apparently teaches a mechanism to enable collaborative updates to locally rendered application windows across a multiple workstation network. *Hao* analyzes input events from multiple applications and puts them in proper execution order. *Hao*'s Inter-Access Event Process (IEP) logic is driven by input events such as mouse, keyboard, or cursor movement events. When a user's mouse enters a shared window, the input events are captured and sent to the IEP rather than to the client that would normally receive the input event. The IEP then multicasts the input events to all shared windows. (*Hao*, column 8, lines 51-54.) Appellants note that *Hao* consistently describes receiving and multicasting input events among shared windows. Input events as described by *Hao* include mouse, keyboard, or cursor movement events. Thus, the private events apparently taught by *Hao* are input events entered via input devices associated with a local workstation.

With regard to event processing, *Hao*'s IEP provides a mechanism to access, control, and distribute private input events directly to/from application windows associated with a plurality of processes interacting concurrently. The IEP mechanism

uses a combination of active window entering, capturing, and input event multi-casting to distribute window events across different workstations or systems. (See *Hao* column 5, lines 52-57.)

The application sharing logic claimed by the Appellants is fundamentally different. In contrast with *Hao*'s capture and multicasting of private input events, Appellants' claimed application sharing logic is configured to "transmit locally generated events including said echo events to said remote application." Appellants' echo events are not responsive to operator inputs entered via a mouse, keyboard, or cursor movements, as is the case with *Hao*'s IEP. Appellants' application sharing logic generates the echo events. Appellants' application sharing logic does not simply sequence mouse, keyboard, or cursor movements for distribution to multiple application windows. Moreover, Appellants' claimed application sharing logic is configured to "pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time."

Simply stated, the sequencing of private input events (*e.g.*, mouse, keyboard or cursor movement events) into a proper execution order within the IEP in *Hao* is not an echo event that is sent to a remote application to pace the transmission of locally generated events in accordance with an echo event receive time (*i.e.*, the time when the echo event reached the remote application) and a respective echo event transmit time (*i.e.*, the time when the echo event was sent from the application sharing logic). *Hao*'s private input events are not used to pace the transmission of locally generated events in the manner described and claimed in the present application. *Hao*'s private input events are simply checked and sorted for proper execution order, in accordance with when they were entered by each operator. The private input events, having been sequenced by the

IEP, are then multi-cast to associated application windows. *Hao*'s multi-casting of private input events is devoid of feedback associated with when the private input events are received at each of the associated application windows. *Huo*'s IEP does not include a mechanism for adjusting the rate of transmission of locally generated events in response to an echo event receive time. Thus, *Hao*'s private input events are not "echo events," as that phrase must be construed in the context of the present application.

By way of illustration, claim 2 of the present application specifies that the "local application sharing logic is configured to transmit echo events to a remote application sharing logic at predetermined intervals." This allows pacing logic to determine over time if a remote application is receiving (and echoing) the echo events at a rate commensurate with the transmission rate of locally generated events. *Hao*'s application windows simply receive and process the sequenced input events as they are received. Accordingly, *Hao* does not teach a mechanism that transmits echo events at predetermined intervals. Therefore, the private input events as processed and multi-cast by the IEP cannot be used to control the transmission of locally generated events in the manner of Appellants' claimed local application sharing logic.

Likewise, claim 4 of the present application calls for the local application sharing logic to calculate a difference of the echo event receive time and the respective echo event transmit time. *Hao*'s IEP cannot operate in this fashion as the IEP does not receive feedback from the remote application windows regarding when an echo event was received and transmitted back to the application sharing logic. Thus, for these illustrative and other reasons, the "private input events" of *Hao* cannot properly be applied as a teaching against the "echo events" as claimed by the present application.

The Advisory Action and the final Office Action exemplify the Examiner's failure to recognize and consider the aforementioned patentable distinctions between Appellants' claimed invention and *Hao*'s IEP. The Advisory Action (Paper No. 8, page 2, continuation of item 5), in response to Appellants' arguments, merely references the rejections submitted in the Final Office Action (Paper No. 6). In this regard, the Final Office Action, in response to Appellants' previous remarks, alleged that Appellants' claimed application sharing logic configured to "pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time" are limitations still met by *Hao* as disclosed in the claim rejection. Not only is the Examiner's conclusion that *Hao*'s private input events are Appellants' claimed echo events in error, as shown above, Appellants note that the statement of the rejection of claims 1 and 15 fails to recognize or even allege that *Hao* discloses, teaches, or suggest Appellant' claimed limitation that the application sharing logic is configured to "pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time." Thus, it is clear that the Examiner has failed to consider ALL limitations of Appellants' claimed invention.

It is axiomatic that "[a]nticipation requires the disclosure in a single prior art reference of *each element* of the claim under consideration." *W.L. Gore & Associates, Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554, 220 U.S.P.Q. 303, 313. (Fed. Cir. 1983.) (*Emphasis added.*) Therefore, every claimed feature of the claimed invention must be represented in the applied reference (*i.e.*, *Hao*) to constitute a proper rejection under 35 U.S.C. §102(b).

For convenience of analysis, Appellants repeat the statement of the rejections of claims 1, 8, 9, and 15 on the following page in its entirety.

As to claim 8, Hao discloses transmitting events to be shared from the local application (113 to 112, Fig. 2), a local application sharing logic configured to receive the events (input events going from 112 to 115, Fig. 2), generate echo events (private events, line 52 column 6), insert the echo events with the events to be shared (lines 51-58 column 6) and transmit them (input events going to 122, Fig. 2) to a remote application (122, Fig. 2).

Appellants note that the Office Action (Paper No. 6) fails, on its face, to set forth the necessary *prima facie* rejection for several of the claims. Claim 1 is exemplary. In this regard, claim 1 recites local application sharing logic configured to “*pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.*” As is clear from the statement of the rejection of claim 8, which the Examiner references in rejecting independent claims 1 and 15, the Office Action fails to address this limitation of claim 1. Thus, on its face, the Office Action is inadequate and should be withdrawn. Accordingly, all claims of the present application have been rejected under a fundamental misapplication of the principal reference (*Hao*), and the Board of Patent Appeals should overturn all rejections on this basis alone.

Having set forth these fundamental distinctions of Appellants’ invention and clearly shown that the Examiner has overlooked a limitation that is clearly not shown or inherent in the cited reference, each claim group will now be addressed in detail.

Discussion of Claim Group A

Hao does not render Appellants’ claimed invention obvious under 35 U.S.C. §102(b). Furthermore, the proposed combinations of *Hao* in view of *Stumm* and *Hao* in view of *Othmer* do not render Appellants’ claimed invention obvious under 35 U.S.C. §103(a). The Examiner rejected claim 1 under 35 U.S.C. §102(b) over *Hao*. The

Examiner rejected claims 2 and 3 under 35 U.S.C. §103(a) over *Hao* in view of *Stumm*. The Examiner further rejected claims 4-7 under 35 U.S.C. §103(a) over *Hao* in view of *Othmer*. (See Office Action, Paper No. 6, Page 2, Item 3; Page 3, Item 4; and Page 4, Item 5).

In rejecting Appellants' claims 1-7, the Examiner alleges that Fig. 2 of *Hao* and column 6, lines 51-58 of *Hao* teaches Appellants' claimed application sharing logic configured to receive events to be shared, generate echo events, insert the echo events with the events to be shared and transmit them to a remote application. Appellants disagree.

"Anticipation requires the disclosure in a single prior art reference of *each element* of the claim under consideration." *W.L. Gore & Associates, Inc. v. Garlock, Inc., supra*. (Emphasis added.) The present rejection fails to meet the burden of establishing a *prima facie* case for anticipation because it fails to identify a single prior-art reference that discloses, teaches, or suggests each element and/or method limitation of the claimed invention. Specifically, as shown above, *Hao* fails to disclose, teach, or suggest Appellants' claimed echo events. Consequently, claim 1 is allowable for at least this reason and the rejection of claim 1 must be overturned.

Appellants further note that the rejection of claim 1 is improper for failing to allege where each limitation in claim 1 can be found in the *Hao* reference. Appellants submit that the rejection of claim does not address each limitation of Appellants' claim 1 because these limitations are not found in *Hao*. For at least this additional reason, the rejection of claim 1 must be overturned.

For convenience of analysis independent claim 1 is repeated below in its entirety.

1. A system for pacing the transmission of events associated with a local application that are shared with at least one corresponding remote application, the system comprising:
 - a local application sharing logic coupled to the local application, said local application sharing logic configured to:
 - receive events to be shared from said local application with the at least one corresponding remote application;
 - generate echo events;*
 - transmit locally generated events including said echo events to said remote application; and*
 - pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.*

(Appellants' independent claim 1 - *Emphasis added.*)

The cited art of record fails to disclose, teach, or suggest at least the emphasized elements of pending claim 1 as shown above. Consequently, claim 1 is allowable and the rejection must be overturned.

Specifically, the system disclosed in *Hao* fails to disclose, teach, or suggest Appellants' local application sharing logic configured to "generate echo events." In this regard, the statement of the rejection alleges that the private events listed on column 6, line 52 of *Hao* teach Appellants' claimed echo events. Appellants disagree.

Hao apparently teaches a mechanism to enable collaborative updates to locally rendered application windows across a multiple workstation network. With regard to event processing, *Hao*'s IEP provides a mechanism to access, control, and distribute private input events directly to/from application windows associated with a plurality of processes interacting concurrently. The IEP mechanism uses a combination of active window entering, capturing, and input event multi-casting to distribute window events across different workstations or systems. (See *Hao* column 5, lines 52-57.) *Hao* analyzes input events from multiple applications and puts them in proper execution

order. *Hao*'s IEP process logic is driven by input events such as mouse, keyboard or cursor movement events. When a user's mouse enters a shared window, the input events are captured and sent to the IEP rather than to the client that would normally receive the input event. The IEP then multicasts the input events to all shared windows. (*Hao* column 8, lines 51-54.) Thus, Appellants respectfully submit that *Hao* consistently describes receiving and multicasting input events among shared windows. Input events as described by *Hao* include mouse, keyboard or cursor movement events. The private events apparently taught by *Hao* are input events entered via input devices associated with a local workstation. These input events are responsive to operator initiated actions on a keyboard, mouse, or other pointing device. *Hao*'s capture and multicasting of private input events does not disclose, teach, or suggest Appellants' claimed echo events, which are generated and inserted into a data stream designated for a remote application, which receives the echo events and returns them to the application sharing logic with time information. As shown above, *Hao*'s IEP, which sequences and multicasts operator initiated input events is devoid of a mechanism that generates echo events and paces transmission of locally generated events in accordance with timing information fed back to application sharing logic. For at least this reason *Hao* does not anticipate Appellants' claim 1. Consequently, claim 1 is allowable and the rejection must be overturned.

Furthermore, because *Hao* fails to disclose, teach, or suggest Appellants' local application sharing logic configured to generate echo events, *Hao* cannot disclose, teach, or suggest Appellants' claimed application sharing logic configured to "transmit locally generated events including said echo events to said remote application." As shown

above, *Hao*'s private input events are not "echo events" because no event in *Hao* is returned or echoed to *Hao*'s IEP.

Moreover, *Hao* cannot disclose, teach, or suggest Appellants' claimed application sharing logic configured to "pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time." As shown above, *Hao*'s private events are sequenced in accordance with their receipt and a proper execution order. *Hao* contains no mechanism for accounting for an event receive time and a respective echo event transmit time.

With regard to event processing, *Hao*'s IEP analyzes events from multiple applications and puts them in proper execution order. Optionally, the IEP can replicate the event stream or tailor it for some targets to allow for different key codes, colormaps, and the like. (See *Hao* column 6, lines, 37-40.) Appellants respectfully submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest logic configured to "transmit locally generated events including said echo events to said remote application." Moreover, Appellants further submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest logic configured to "pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time." Significantly, *Hao* is entirely silent regarding an event receive time and an event transmit time. Consequently, *Hao* cannot be said to anticipate Appellants' claim 1. For at least these reasons, *Hao* does not anticipate Appellants' claim 1. Accordingly, claim 1 is allowable and the rejection must be overturned.

Claims 2 and 3 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hao* in view of *Stumm*. Appellants disagree for at least the

reason that the combination of *Hao* in view of *Stumm* does not disclose, teach, or suggest all features of the claimed invention.

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

As shown above regarding the patentability of claim 1, *Hao*'s capture and multicasting of private input events does not disclose, teach, or suggest Appellants' claimed echo events. For at least the reason that *Hao*'s private input events are not Appellants' claimed echo events, *Hao* does not disclose, teach, or suggest each element of Appellants' claim 1. Furthermore, *Hao* fails to disclose, teach, or suggest Appellants' claimed local application sharing logic configured to logic configured to "transmit locally generated events including said echo events to said remote application." Moreover, *Hao* fails to disclose, teach, or suggest application sharing logic configured to "pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time."

In this regard, the statement of the rejection of claims 2 and 3 alleges that *Stumm* discloses a client and server system in which information is transmitted at predetermined intervals. The Examiner concludes that it would have been obvious to apply the teachings of *Stumm* to the system of *Hao* to allow intended information to be received at the right time as disclosed by *Stumm*. Significantly, *Stumm* fails to disclose, teach, or suggest that an echo event is transmitted from local application sharing logic, received at a remote application, and retransmitted to the local application sharing logic. More significantly, both *Hao* and *Stumm* fail to disclose, teach, or suggest echo events.

Consequently, the combination of *Hao* in view of *Stumm* cannot teach this element to one skilled in the art.

In addition, both *Hao* and *Stumm* fail to disclose, teach, or suggest inserting echo events along with other events intended for delivery to a remote application. Consequently, the combination of *Hao* in view of *Stumm* cannot teach this element to one skilled in the art.

Moreover, *Hao* and *Stumm* fail to disclose, teach, or suggest application sharing logic configured to “pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.” Because *Stumm* fails to remedy the failure of *Hao* to teach each element and limitation of the claimed invention, the proposed combination of *Hao* and *Stumm* does not establish a *prima facie* case of obviousness with regard to Appellants’ dependent claims 2 and 3. Thus, claims 2 and 3 are allowable and the rejection of claims 2 and 3 must be overturned.

Claims 4-7 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hao* in view of *Othmer*. Appellants disagree for at least the reason that the combination of *Hao* in view of *Othmer* does not disclose, teach, or suggest all features of the claimed invention.

As shown above regarding the patentability of claim 1, *Hao*’s capture and multicasting of private input events does not disclose, teach, or suggest Appellants’ claimed echo events. For at least the reason that *Hao*’s private input events are not Appellants’ claimed echo events, *Hao* does not suggest each element of Appellants’ claim 1. Furthermore, *Hao* fails to disclose, teach, or suggest Appellants’ claimed local application sharing logic configured to logic configured to “transmit locally generated

events including said echo events to said remote application.” Moreover, *Hao* fails to suggest Appellants’ claimed local application sharing logic configured to “pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.”

In this regard, the statement of the rejection of claims 4-7 alleges that *Othmer* discloses a server that monitors the performance of clients and generates statistics regarding the frequency of identified problems. The Examiner concludes that it would have been obvious to apply the teachings of *Othmer* to the system of *Hao* to allow a server to detect defects in client processes as disclosed by *Othmer*.

First, Appellants fail to see the relevance of gathering statistics regarding the occurrence of defects in client processes with respect to Appellants’ claimed invention which is directed to pacing the transmission of locally generated events such that a remote application processing the events does not get out of sync with the local application. Second, and more significantly, *Othmer* is silent regarding an echo event being transmitted from local application sharing logic, received at a remote application, and retransmitted to the local application sharing logic. Consequently, for at least this reason, the combination of *Hao* in view of *Othmer* cannot teach this element of Appellants’ claimed invention to one skilled in the art.

In addition, the combination of *Hao* and *Othmer* fails to disclose, teach, or suggest application sharing logic configured to transmit echo events. Consequently the combination of *Hao* in view of *Othmer* cannot teach this element to one skilled in the art.

Moreover, both *Hao* and *Othmer* fail to disclose, teach, or suggest application sharing logic configured to “pace the transmission of locally generated events in

accordance with an echo event receive time and a respective echo event transmit time.” Because *Othmer* fails to remedy the failure of *Hao* to teach each element and limitation of the claimed invention, the proposed combination of *Hao* and *Othmer* does not establish a *prima facie* case of obviousness with regard to Appellants’ dependent claims 4-7. Thus, claims 4-7 are allowable and the rejection of claims 4-7 must be overturned.

Discussion of Claim Group B

Hao does not render Appellants’ claimed invention obvious under 35 U.S.C. §102(b). Furthermore, the proposed combinations of *Hao* in view of *Stumm* and *Hao* in view of *Othmer* do not render Appellants’ claimed invention obvious under 35 U.S.C. §103(a). The Examiner rejected claims 8 and 9 under 35 U.S.C. §102(b) over *Hao*. The Examiner rejected claim 10 under 35 U.S.C. §103(a) over *Hao* in view of *Stumm*. The Examiner further rejected claims 11-14 under 35 U.S.C. §103(a) over *Hao* in view of *Othmer*. (See Office Action, Paper No. 6, Page 2, Item 3; Page 3, Item 4; and Page 4, Item 5).

In rejecting Appellants’ claims 8-14, the Examiner alleges that Fig. 2 of *Hao* and column 6, lines 51-58 of *Hao* teaches Appellants’ claimed application sharing logic configured to receive events to be shared, generate echo events, insert the echo events with the events to be shared and transmit them to a remote application. Appellants disagree.

“Anticipation requires the disclosure in a single prior art reference of *each element* of the claim under consideration.” *W.L. Gore & Associates, Inc. v. Garlock, Inc., supra.* (Emphasis added.) The present rejection fails to meet the burden of establishing a *prima facie* case for anticipation because it fails to identify a single prior-

art reference that discloses, teaches, or suggests each element and/or method limitation of the claimed invention. Consequently, claim 8 is allowable for at least this reason and the rejection of claim 8 must be overturned.

For convenience of analysis independent claim 8 is repeated below in its entirety.

8. A method for pacing the transmission of events associated with a local application that are shared with at least one corresponding remote application, the method comprising the steps of:
transmitting said events to be shared from said local application; and
providing a local application sharing logic configured to receive said events to be shared, said local application sharing logic further configured to:
generate echo events;
controllably insert the echo events with said events to be shared; and
transmit said events to be shared and said echo events to a remote application.

(Appellants' independent claim 8 - *emphasis added.*)

The cited art of record fails to disclose, teach, or suggest at least the emphasized elements of pending claim 8 as shown above. Consequently, claim 8 is allowable and the rejection must be overturned.

Specifically, the system disclosed in *Hao* fails to disclose, teach, or suggest Appellants' method for pacing the transmission of events associated with a local application that are shared with at least one corresponding remote application including the step of providing a local application sharing logic configured to "generate echo events." In this regard, the statement of the rejection alleges that the private events listed on column 6, line 52 of *Hao* teach Appellants' claimed echo events. Appellants disagree.

As shown above, *Hao* apparently teaches a mechanism to enable collaborative updates to locally rendered application windows across a multiple workstation network. With regard to event processing, *Hao*'s IEP provides a mechanism to access, control, and distribute private input events directly to/from application windows associated with a plurality of processes interacting concurrently. The IEP mechanism uses a combination of active window entering, capturing, and input event multi-casting to distribute window events across different workstations or systems. (See *Hao* column 5, lines 52-57.) *Hao* analyzes input events from multiple applications and puts them in proper execution order. *Hao*'s IEP process logic is driven by input events such as mouse, keyboard or cursor movement events. When a user's mouse enters a shared window, the input events are captured and sent to the IEP rather than to the client that would normally receive the input event. The IEP then multicasts the input events to all shared windows. (*Hao* column 8, lines 51-54.) Thus, Appellants respectfully submit that *Hao* consistently describes receiving and multicasting input events among shared windows. Input events as described by *Hao* include mouse, keyboard or cursor movement events. The private events apparently taught by *Hao* are input events entered via input devices associated with a local workstation. These input events are responsive to operator initiated actions on a keyboard, mouse, or other pointing device. *Hao*'s capture and multicasting of private input events does not disclose, teach, or suggest Appellants' claimed echo events, which are generated and inserted into a data stream designated for a remote application, which receives the echo events and returns them to the application sharing logic with time information. As shown above, *Hao*'s IEP, which sequences and multicasts operator initiated input events is devoid of a mechanism that generates echo events and paces transmission of locally generated events in accordance

with timing information fed back to application sharing logic. For at least this reason *Hao* does not anticipate Appellants' claim 8. Consequently, claim 8 is allowable and the rejection must be overturned.

Furthermore, because *Hao* fails to disclose, teach, or suggest Appellants' claimed step of providing a local application sharing logic configured to generate echo events, *Hao* cannot disclose, teach, or suggest Appellants' claimed application sharing logic configured to "controllably insert the echo events with said events to be shared." As shown above, *Hao*'s private input events are not "echo events" because no event in *Hao* is returned to *Hao*'s IEP. For at least this additional reason, *Hao* fails to anticipate Appellants' claim 8 and the rejection must be overturned.

Moreover, *Hao* cannot disclose, teach, or suggest Appellants' claimed step of providing a local application sharing logic configured to "transmit said events to be shared and said echo events to a remote application." As shown above, *Hao*'s private events are sequenced in accordance with their receipt and a proper execution order. *Hao* contains no mechanism for generating and transmitting echo events to a remote application.

With regard to event processing, *Hao*'s IEP analyzes events from multiple applications and puts them in proper execution order. Optionally, the IEP can replicate the event stream or tailor it for some targets to allow for different key codes, colormaps, and the like. (See *Hao* column 6, lines, 37-40.) Appellants respectfully submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest providing a local application sharing logic configured to "transmit said events to be shared and said echo events to a remote application."

Consequently, for at least this additional reason, *Hao* cannot be said to anticipate Appellants' claim 8 and the rejection must be overturned.

Because independent claim 8 is allowable dependent claim 9 is also allowable as claim 9 includes all the elements of independent claim 8 from which claim 9 depends. *See In re Fine*, 837 F.2d 1071 (Fed. Cir. 1988). Accordingly, Appellants submit that the rejection of claim 9 must also be overturned.

Claim 10 presently stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hao* in view of *Stumm*. Appellants disagree for at least the reason that the combination of *Hao* in view of *Stumm* does not disclose, teach, or suggest all limitations of the claimed invention.

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In Re Dow Chemical*, *supra*, and *In re Keller*, *supra*.

As shown above regarding the patentability of claim 8, *Hao*'s capture and multicasting of private input events does not disclose, teach, or suggest Appellants' claimed step of providing a local application sharing logic configured to generate echo events. For at least the reason that *Hao*'s private input events are not Appellants' claimed echo events, *Hao* does not suggest each element of Appellants' claim 8. Furthermore, *Hao* fails to suggest Appellants' claimed local application sharing logic configured to "controllably insert the echo events with said events to be shared." As shown above, *Hao*'s private input events are not "echo events" because no event in *Hao* is returned to *Hao*'s IEP. Moreover, *Hao* cannot disclose, teach, or suggest Appellants'

claimed step of providing a local application sharing logic configured to “transmit said events to be shared and said echo events to a remote application.”

In this regard, the statement of the rejection of claim 10 alleges that *Stumm* discloses a client and server system in which information is transmitted at predetermined intervals. The Examiner concludes that it would have been obvious to apply the teachings of *Stumm* to the system of *Hao* to allow intended information to be received at the right time as disclosed by *Stumm*. Significantly, *Stumm* fails to disclose, teach, or suggest that an echo event is transmitted from local application sharing logic. More significantly, both *Hao* and *Stumm* fail to disclose, teach, or suggest echo events. Consequently the combination of *Hao* in view of *Stumm* cannot teach this limitation to one skilled in the art.

Because *Stumm* fails to remedy the failure of *Hao* to teach each element and limitation of the claimed invention, the proposed combination of *Hao* and *Stumm* does not establish a *prima facie* case of obviousness with regard to Appellants’ dependent claim 10. Thus, claim 10 is allowable and the rejection of claim 10 must be overturned.

Claims 11-14 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hao* in view of *Othmer*. Appellants disagree for at least the reason that the combination of *Hao* in view of *Othmer* does not disclose, teach, or suggest all features and limitations of the claimed invention.

As shown above regarding the patentability of claim 8, *Hao*’s capture and multicasting of private input events does not disclose, teach, or suggest Appellants’ claimed echo events. For at least the reason that *Hao*’s private input events are not Appellants’ claimed echo events, *Hao* does not suggest each element of Appellants’ claim 8. Furthermore, *Hao* fails to suggest Appellants’ claimed step of providing local

application sharing logic configured to “controllably insert the echo events with said events to be shared.” As shown above, *Hao*’s private input events are not “echo events” because no event in *Hao* is returned to *Hao*’s IEP. Moreover, *Hao* cannot disclose, teach, or suggest Appellants’ claimed step of providing a local application sharing logic configured to “transmit said events to be shared and said echo events to a remote application.”

In this regard, the statement of the rejection of claims 11-14 alleges that *Othmer* discloses a server that monitors the performance of clients and generates statistics regarding the frequency of identified problems. The Examiner concludes that it would have been obvious to apply the teachings of *Othmer* to the system of *Hao* to allow a server to detect defects in client processes as disclosed by *Othmer*. Significantly, *Othmer* is silent regarding the generation of an echo event by a local application sharing logic. Consequently, for at least this reason, the combination of *Hao* in view of *Othmer* cannot teach this element to one skilled in the art.

In addition, the combination of *Hao* and *Othmer* fails to disclose, teach, or suggest providing a local application sharing logic configured to “controllably insert the echo events with said events to be shared.” Consequently the combination of *Hao* in view of *Othmer* cannot teach this element to one skilled in the art.

Furthermore, both *Hao* and *Othmer* fail to disclose, teach, or suggest providing a local application sharing logic configured to “transmit said events to be shared and said echo events to a remote application.” Because *Othmer* fails to remedy the failure of *Hao* to teach each element and limitation of the claimed invention, the proposed combination of *Hao* and *Othmer* does not establish a *prima facie* case of obviousness with regard to

Appellants' dependent claims 11-14. Thus, claims 11-14 are allowable and the rejection of claims 11-14 must be overturned.

Discussion of Claim Group C

Hao does not render Appellants' claimed invention obvious under 35 U.S.C. §102(b). Furthermore, the proposed combinations of *Hao* in view of *Stumm* and *Hao* in view of *Othmer* do not render Appellants' claimed invention obvious under 35 U.S.C. §103(a). The Examiner rejected claim 15 under 35 U.S.C. §102(b) over *Hao*. The Examiner rejected claim 16 under 35 U.S.C. §103(a) over *Hao* in view of *Stumm*. The Examiner further rejected claims 17 and 19-21 under 35 U.S.C. §103(a) over *Hao* in view of *Othmer*. (See Office Action, Paper No. 6, Page 2, Item 3; Page 3, Item 4; and Page 4, Item 5).

In rejecting Appellants' claims 15-17 and 19-21, the Examiner alleges that Fig. 2 of *Hao* and column 6, lines 51-58 of *Hao* teaches Appellants' claimed application sharing logic configured to receive events to be shared, generate echo events, insert the echo events with the events to be shared and transmit them to a remote application. Appellants disagree.

"Anticipation requires the disclosure in a single prior art reference of *each element* of the claim under consideration." *W.L. Gore & Associates, Inc. v. Garlock, Inc., supra*. (Emphasis added.) The present rejection fails to meet the burden of establishing a *prima facie* case for anticipation because it fails to identify a single prior art reference that discloses, teaches, or suggests each element and/or method limitation of the claimed invention. Consequently, claim 15 is allowable for at least this reason and the rejection of claim 15 must be overturned.

Appellants further note that the rejection of claim 15 is improper for failing to allege where each limitation in claim 15 can be found in the *Hao* reference.

Appellants submit that the rejection does not address each limitation of Appellants' claim 15 because these limitations are not found in *Hao*. For at least this additional reason, the rejection of claim 15 must be overturned.

For convenience of analysis independent claim 15 is repeated below in its entirety.

15. A system for pacing the transmission of events associated with a local application that are shared with at least one corresponding remote application, said pacing system comprising:
means for transmitting said events to be shared from said local application;
means for generating echo events;
means for inserting said echo events along with said events to be shared; and
means for pacing the transmission of said events to be shared, said means for pacing responsive to an echo delay derived from said echo events.

(Appellants' independent claim 15 - *emphasis added*.)

The cited art of record fails to disclose, teach, or suggest at least the emphasized elements of pending claim 15 as shown above. Consequently, claim 15 is allowable and the rejection must be overturned.

Specifically, the system disclosed in *Hao* fails to disclose, teach, or suggest Appellants' pacing system comprising a "means for generating echo events." In this regard, the statement of the rejection alleges that the private events listed on column 6, line 52 of *Hao* teach Appellants' claimed echo events. Appellants disagree.

Hao apparently teaches a mechanism to enable collaborative updates to locally rendered application windows across a multiple workstation network. With regard to event processing, *Hao*'s IEP provides a mechanism to access, control, and distribute

private input events directly to/from application windows associated with a plurality of processes interacting concurrently. The IEP mechanism uses a combination of active window entering, capturing, and input event multi-casting to distribute window events across different workstations or systems. (See *Hao* column 5, lines 52-57.) *Hao* analyzes input events from multiple applications and puts them in proper execution order. *Hao*'s IEP process logic is driven by input events such as mouse, keyboard or cursor movement events. When a user's mouse enters a shared window, the input events are captured and sent to the IEP rather than to the client that would normally receive the input event. The IEP then multicasts the input events to all shared windows. (*Hao* column 8, lines 51-54.) Thus, Appellants respectfully submit that *Hao* consistently describes receiving and multicasting input events among shared windows. Input events as described by *Hao* include mouse, keyboard or cursor movement events. The private events apparently taught by *Hao* are input events entered via input devices associated with a local workstation. These input events are responsive to operator initiated actions on a keyboard, mouse, or other pointing device. *Hao*'s capture and multicasting of private input events does not disclose, teach, or suggest Appellants' claimed means for generating echo events.

As shown above, *Hao*'s IEP, which sequences and multicasts operator initiated input events is devoid of a mechanism that generates echo events and paces transmission of locally generated events in accordance with timing information fed back to application sharing logic. For at least this reason *Hao* does not anticipate Appellants' claim 15. Consequently, claim 15 is allowable and the rejection must be overturned.

Furthermore, because *Hao* fails to disclose, teach, or suggest Appellants' pacing system comprising a means for generating echo events, *Hao* cannot disclose, teach, or

suggest Appellants' claimed "means for inserting said echo events along with said events to be shared." As shown above, *Hao*'s private input events are not "echo events" because no event in *Hao* is returned to *Hao*'s IEP. *Hao* is silent regarding inserting other events in the event stream designated for delivery at associated application windows.

Moreover, *Hao* cannot disclose, teach, or suggest Appellants' claimed "means for pacing the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time." As shown above, *Hao*'s private events are sequenced in accordance with their receipt and a proper execution order. *Hao* contains no mechanism for accounting for an event receive time and a respective echo event transmit time.

With regard to event processing, *Hao*'s IEP analyzes events from multiple applications and puts them in proper execution order. Optionally, the IEP can replicate the event stream or tailor it for some targets to allow for different key codes, colormaps, and the like. (See *Hao* column 6, lines, 37-40.) Appellants respectfully submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest "means for inserting said echo events along with said events to be shared." Moreover, Appellants further submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest "means for pacing the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time." Significantly, *Hao* is entirely silent regarding an event receive time and an event transmit time. For at least these reasons, *Hao* does not anticipate Appellants' claim 15. Accordingly, claim 15 is allowable and the rejection must be overturned.

Claim 16 presently stands rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hao* in view of *Stumm*. Appellants disagree for at least the reason that the combination of *Hao* in view of *Stumm* does not disclose, teach, or suggest all features of the claimed invention.

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, e.g., *In Re Dow Chemical, supra*, and *In re Keller, supra*.

As shown above regarding the patentability of claim 15, *Hao*'s capture and multicasting of private input events does not disclose, teach, or suggest Appellants' claimed "means for generating echo events." For at least the reason that *Hao*'s private input events are not Appellants' claimed echo events, *Hao* does not suggest each element of Appellants' claim 15. Furthermore, *Hao* fails to suggest Appellants' "means for inserting said echo events along with said events to be shared." Moreover, Appellants further submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest "means for pacing the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time."

In this regard, the statement of the rejection of claim 16 alleges that *Stumm* discloses a client and server system in which information is transmitted at predetermined intervals. The Examiner concludes that it would have been obvious to apply the teachings of *Stumm* to the system of *Hao* to allow intended information to be received at the right time as disclosed by *Stumm*. Significantly, *Stumm* fails to disclose, teach, or suggest that an echo event is transmitted from local application sharing logic, received at

a remote application, and retransmitted to the local application sharing logic. More significantly, both *Hao* and *Stumm* fail to disclose, teach, or suggest echo events. Consequently the combination of *Hao* in view of *Stumm* cannot teach this element to one skilled in the art.

In addition, both *Hao* and *Stumm* fail to disclose, teach, or suggest a “means for inserting said echo events along with said events to be shared.” Consequently the combination of *Hao* in view of *Stumm* cannot teach this element to one skilled in the art. Moreover, Appellants further submit that both *Hao* and *Stumm* fail to disclose, teach, or suggest a “means for pacing the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.” Consequently the combination of *Hao* in view of *Stumm* cannot teach this element to one skilled in the art.

Because *Stumm* fails to remedy the failure of *Hao* to teach each element and limitation of the claimed invention, the proposed combination of *Hao* and *Stumm* does not establish a *prima facie* case of obviousness with regard to Appellants’ dependent claim 16. Thus, claim 16 is allowable and the rejection of claim 16 must be overturned.

Claims 17 and 19-21 presently stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over *Hao* in view of *Othmer*. Appellants disagree for at least the reason that the combination of *Hao* in view of *Othmer* does not disclose, teach, or suggest all features of the claimed invention.

As shown above regarding the patentability of claim 15, *Hao*’s capture and multicasting of private input events does not disclose, teach, or suggest Appellants’ claimed “means for generating echo events.” For at least the reason that *Hao*’s private input events are not Appellants’ claimed echo events, *Hao* does not suggest each

element of Appellants' claim 15. Furthermore, *Hao* fails to suggest Appellants' "means for inserting said echo events along with said events to be shared." Moreover, Appellants further submit that placing input events from multiple applications into proper execution order does not disclose, teach, or suggest "means for pacing the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time."

In this regard, the statement of the rejection of claims 17 and 19-21 alleges that *Othmer* discloses a server that monitors the performance of clients and generates statistics regarding the frequency of identified problems. The Examiner concludes that it would have been obvious to apply the teachings of *Othmer* to the system of *Hao* to allow a server to detect defects in client processes as disclosed by *Othmer*. Significantly, *Othmer* is silent regarding an echo event being transmitted from local application sharing logic, received at a remote application, and retransmitted to the local application sharing logic. Consequently, for at least this reason, the combination of *Hao* in view of *Othmer* cannot teach this element to one skilled in the art.

In addition, the combination of *Hao* and *Othmer* fails to disclose, teach, or suggest application sharing logic configured to insert echo events along with local events. Consequently the combination of *Hao* in view of *Othmer* cannot teach this element to one skilled in the art.

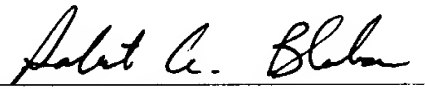
Moreover, both *Hao* and *Othmer* fail to disclose, teach, or suggest "means for pacing the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time." Because *Othmer* fails to remedy the failure of *Hao* to teach each element and limitation of the claimed invention, the proposed combination of *Hao* and *Othmer* does not establish a *prima facie* case of

obviousness with regard to Appellants' dependent claims 17 and 19-21. Thus, claims 17 and 19-21 are allowable and the rejection of claims 17 and 19-21 must be overturned.

IX. CONCLUSION

Appellants respectfully request that the Board of Appeals overturn the Examiner's rejection of all pending claims 1-17 and 19-21 and allow these claims for the reasons indicated.

Respectfully submitted,
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X. APPENDIX

Claims

1. A system for pacing the transmission of events associated with a local application that are shared with at least one corresponding remote application, the system comprising:

a local application sharing logic coupled to the local application, said local application sharing logic configured to:

receive events to be shared from said local application with the at least one corresponding remote application;

generate echo events;

transmit locally generated events including said echo events to said remote application; and

pace the transmission of locally generated events in accordance with an echo event receive time and a respective echo event transmit time.

2. The system of claim 1, wherein said local application sharing logic is configured to transmit echo events to a remote application sharing logic at predetermined intervals.

Claim 9
same problem

by local
from remote

by remote app
receive from local who

match
to remote application

1 3. The system of claim 2, wherein said remote application sharing logic
2 further comprises:
3 remote pacing logic configured to:
4 receive said echo events; and
5 transmit said echo events to said remote application.

1 4. The system of claim 1, wherein said local application sharing logic is
2 configured to calculate a difference of the echo event receive time and the
3 respective echo event transmit time.

1 5. The system of claim 4, wherein said local application sharing logic
2 further comprises:
3 local message generation logic configured to generate a message for said
4 local application.

1 6. The system of claim 5, wherein said message for said local application is
2 a pacing meter.

1 7. The system of claim 6, wherein said pacing meter utilizes color to
2 indicate the difference.

1 8. A method for pacing the transmission of events associated with a local
2 application that are shared with at least one corresponding remote application,
3 the method comprising the steps of:

4 transmitting said events to be shared from said local application; and
5 providing a local application sharing logic configured to receive said
6 events to be shared, said local application sharing logic further configured to:

7 generate echo events;

8 controllably insert the echo events with said events to be shared;

9 and

10 transmit said events to be shared together with said inserted echo
11 events to a remote application.

1 9. The method of claim 8, wherein said local application sharing logic is
2 further configured to receive said echo events and pace the transmission of said
3 events to be shared in accordance with an echo delay. ^{include echo?}

1 10. The method of claim 8, further comprising the steps of:

2 transmitting said echo events to said remote application at predetermined
3 intervals.

1 11. The method of claim 9, wherein said echo delay comprises a difference
2 between an echo event receive time and a respective echo event transmit time. ^{Alarm?}

1 12. The method of claim 11, further comprising the step of:

2 generating a warning message.

1 13. The method of claim 12, further comprising the step of:
2 forwarding said warning message to said local application.

1 14. The method of claim 13, wherein said warning message comprises a
2 representation of a meter.

1 15. A system for pacing the transmission of events associated with a local
2 application that are shared with at least one corresponding remote application,
3 said pacing system comprising:

4 means for transmitting said events to be shared from said local
5 application;

6 means for generating echo events;

7 means for inserting said echo events along with said events to be shared;

8 and

9 means for pacing the transmission of said events to be shared, said

10 means for pacing responsive to (an echo delay.)

*including the
echo events?*

1 *see claim 2* 16. The system of claim 15, wherein said means for pacing further
2 comprises:

3 means for transmitting a pacing event to said remote application sharing
4 logic at predetermined intervals.

*relation with
echo &
shared event*

1 17. The system of claim 15, wherein said means for pacing further
2 comprises:
3 means for receiving returned echo events; and
4 means for calculating a difference of ^{the} ~~an~~ echo event ^{by echo} ~~receive~~ time and a
5 respective echo event transmit time, said difference representing an echo delay.

1 18. (Cancelled.)

1 19. The system of claim 17 further comprising:
2 means for forwarding a warning message to said local application.

1 20. The system of claim 19, wherein said warning message comprises a
2 representation of a meter.

1 21. The system of claim 20, wherein said meter uses color to indicate said
2 echo delay.